

SwordM™

VD500LBNA

User's Manual

Benutzerhandbuch

Mode d'emploi

Manual del usuario

Manuale dell'utente

安裝說明書

用戶手冊

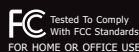
ユーザーズマニュアル

Руководство пользователя



Thermaltake
COOL*all* YOUR LIFE

© 2007 Thermaltake Technology Co., Ltd. All Rights Reserved. 2007.05
All other registered trademarks belong to their respective companies. www.thermaltake.com



Thermaltake
COOL*all* YOUR LIFE

SwordM™

VD500LBNA



User's Manual

Contents

Chapter 1. Product Introduction

1-1	Specification	02
-----	---------------------	----

Chapter 2. Case Mechanical Operation

2-1	Wheel installation	03
2-2	Upper flap installation	04
2-3	Lower visor installation	04
2-4	How to open the panel	05
	A.Side panel	05
	B.Rear panel	05
	C.Top panel	06
2-5	5.25" device installation	07
2-6	HDD installation	08
2-7	How to install the Power Supply	09
2-8	PCI slot usage	09
2-9	7" LCD monitor installation (optional)	10
2-10	7" LCD monitor removal	12

Chapter 3. Motherboard & Lends Installation

3-1	Motherboard installation	13
3-2	Case LED connections	14
3-3	USB2.0 & IEEE1394 Firewire connection	15
3-4	Audio connection	16
3-5	Connexion eSATA	17

Chapter 4. Liquid Cooling Installation

4-1	Installation steps	18
4-2	Install waterblock	19
4-3	Install watertube	29
4-4	Fill Coolant	31
4-5	Schedule Maintenance	33

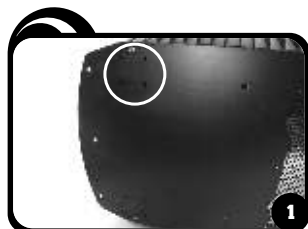
Chapter 1. Product Introduction Specification



Model	VD500LBNA		
Case Type	Super Tower		
Dimension (H*W*D)	650 x 240 x 770 mm 25.6 x 9.4 x 30.3 inch		
Material	Aluminum Extrusion		
Color	Black		
Cooling System	- Front (intake) : 120 x 120 x 25mm blue LED fan, 1300rpm, 17dBA - Rear (Exhaust) : Two 120 x 120 mm fans, 1300rpm, 17dBA - Top (Exhaust) : Two 120 x 120 mm fans, 1300rpm, 17dBA		
Motherboards	9.6" x 9.6" (Micro ATX), 12" x 9.6" (ATX), 12" x 13" (Extend ATX)		
Drive Bays			
-7" Drive Bay	2	or	-
-5.25" Drive Bay	4		6
-3.5" Drive Bay	3 (HDD)		3 (HDD)
Front I/O	e-SATA connector x 1, USB2.0 x 2, IEEE 1394 Firewire x 1, HD Audio		
Expansion Slots	9		
Liquid Cooling System:			
- All copper water block	: For Intel P4 775/478 and AMD AM2/K8		
- Performance radiator :			
(A) Dimension of radiator	: H 295 x W 216 x T 32 mm		
(B) Two 1300RPM 120mm silent fans			
- P400 liquid pump	: Powerful DC 12V liquid pump (400L/hr)		
- Reservoir	: Contains 350 c.c. of liquid capacity		
- Water tube :			
Transparent UV tube (3/8")	, industrial-grade rubber tube (1/4", pre-assembled)		
Optional Components	7" LCD Monitor (P/N:A2413-03)		

Chapter 2. Case Mechanical Operation

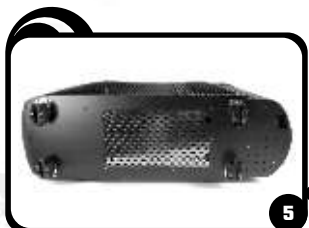
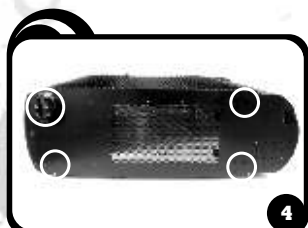
2-1 Wheel installation



These holes are for attaching case wheels.



Please align the 4 holes from the wheel to these four holes on the case and screw in the wheel with the provided screws.



Please repeat with the last three wheels.

2-2 Upper flap installation



To attach the upper flap, please align the visor flap with the hinge tabs on top of the SwordM case.

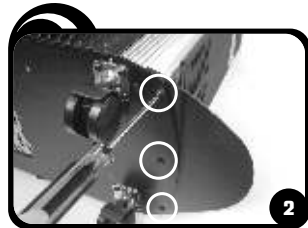


Slide the hinge bar through the visor.

2-3 Lower visor installation



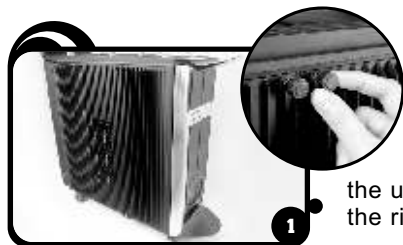
To attach the lower visor, please place the visor over the three holes on the bottom of the case as shown.



Please screw in the visor with supplies hardware through the three holes circled.

2-4 How to open the panel

A.Side panel



Remove the two screws, the upper and lower screws on the right side, side panel.



Holding the left side, side panel, remove the upper and lower screws.



Caution, the Hydraulic lift will open automatically once the screws are removed.

B.Rear panel



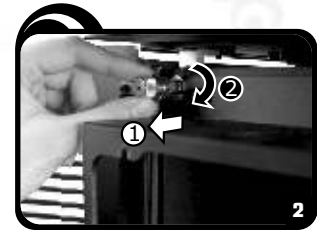
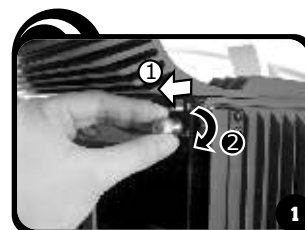
Pull the latch as shown.



The rear panel should swing open.



C.Top panel



Pull both sides of latch and turn clockwise.



Lift top panel.



2-5 5.25" device installation



Remove the drive bay cover by pulling on the cover as shown.



Empty drive bay.



Insert 5.25" drive bay device into empty drive bay.



Secure device with screw.



Repeat with remaining holes.



Finish installation,

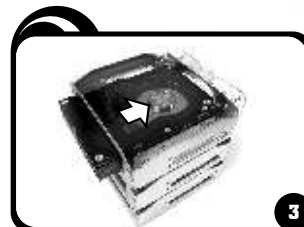
2-6 HDD installation



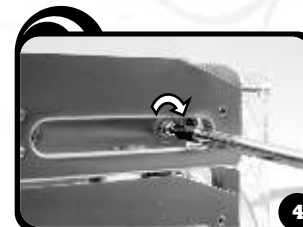
Remove screws on both sides of case.



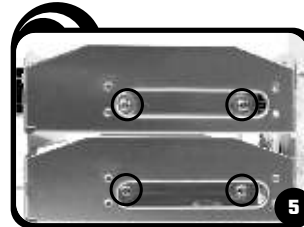
Remove the drive cage.



Insert HDD by sliding it into the cage as shown.



Secure the HDD by tightening the screws.

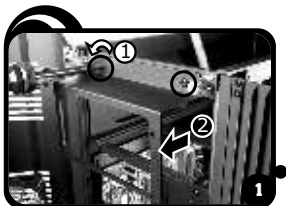


Repeat with remaining mounting points.

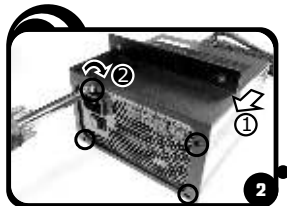


Insert the drive cage back into case and secure the drive cage to case.

2-7 How to install the Power Supply



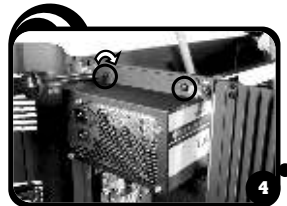
Unscrew screws shown at the top edge of the case and remove the power supply cage.



Slide the power supply into the power supply cage.



Place power supply cage back into position as shown.



Place power supply cage with power supply as shown and screw in to secure.

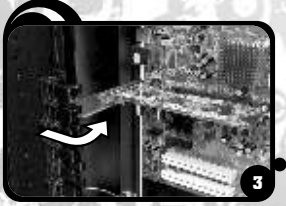
2-8 PCI slot usage



Pull the latch on the PCI card holder.



Insert the PCI card in the corresponding slot

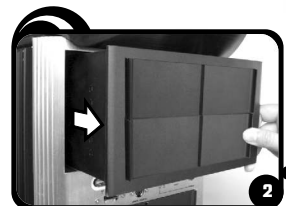


Secure the latch on the PCI card holder

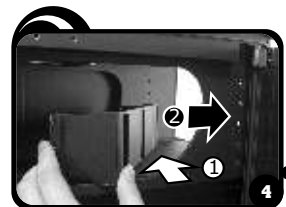
2-9 7" LCD monitor installation (Optional)



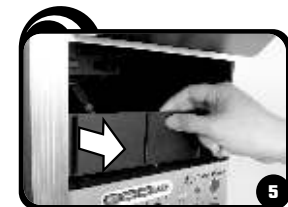
Remove screws shown. There should be two screws on each side of the case and one screw in the middle securing the 5.25" cage.



Remove the 5.25" drive cage.

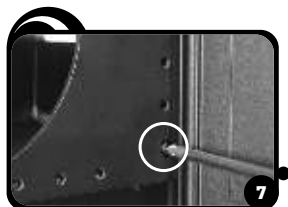


Place 7" drive bay cover in lower bay.

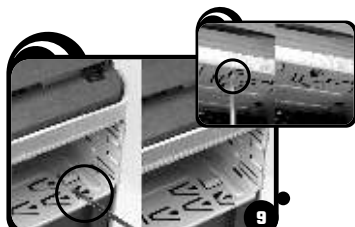




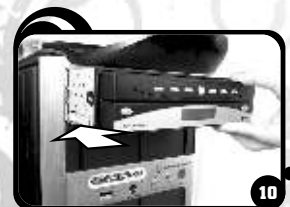
Screw in cover to secure.



Install 7" LCD cage in bay as shown.



Use a screw driver to press metal tabs on the cage to secure the cage.



Insert the 7" LCD device and install plastic trim.



2-10 7" LCD monitor removal



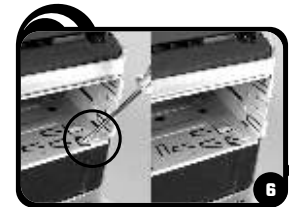
Remove plastic trim as shown.



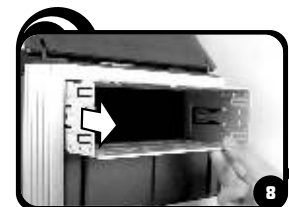
Insert removal tools supplied with the 7" LCD.



Pull out 7" LCD from drive bay as shown.



Pull back retention tabs from the LCD drive cage.



Remove the LCD cage. Finish Removal.



Chapter.3 Motherboard & Leads Installation

3-1 Motherboard Installation

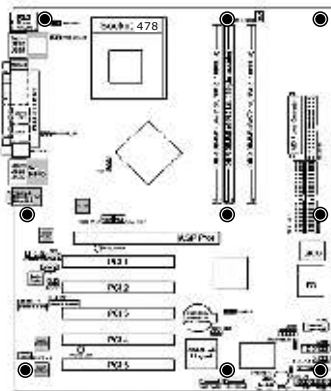
Each motherboard has different standoff layout. It is highly suggested that you refer to your motherboard's manual when installing motherboard into the Case. The cases are applicable with Standard ATX, Micro ATX motherboards. Your motherboard may require a special I/O Panel, which should be included with your motherboard.

Placement Direction:

When installing the motherboard, make sure you follow the direction provided by your motherboard manufacturer. On most standard motherboards, the edge with external ports goes to the rear part of the chassis. It is highly recommended that you install CPU, heat sink and modular components before fixing the motherboard inside the chassis.

Note :

Due to the variety of motherboards on the market, the majority of the motherboards come with their own I/O plates. It's necessary for you to remove the fan holder before install the I/O plates.



The locations of the screw holes. Note these locations and place included standoffs on the chassis first.

Above illustration is a sample of what the motherboard's layout. For more detail screw hole placement, please refer to your motherboard manual.

3-2 Case LED connections

On the front of the case, you can find some LEDs and switch leads (POWER SW*1, POWER LED*1, H.D.D. LED*1, RESET SW*1, SPEAKER*1).

Please consult user manual of your motherboard manufacturer, then connect these leads to the panel header on the motherboard. These leads are usually labeled; if not, please trace them back to the case front to find out their source.

POWER LED

connects to your M/B at the PLED.

POWER SW

connects to the PWR connector on the motherboard.

H.D.D LED

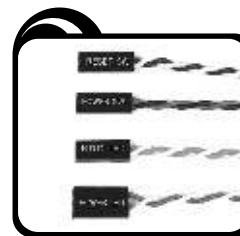
connects to the 2-pin labeled HDD LED connector.

RESET SW

connects to the RSW connector on the motherboard.

SPEAKER

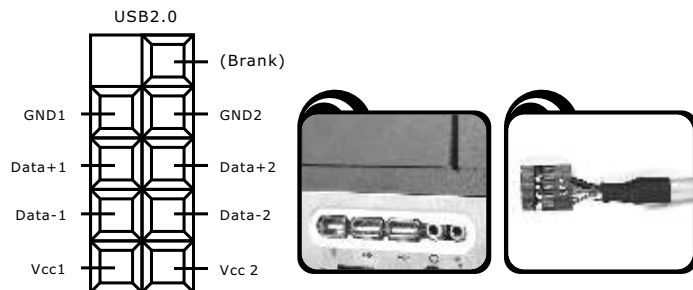
connector: find out the 4-pin labeled SPEAKER on the M/B then connect it.



3-3 USB2.0 & IEEE1394 Firewire connection

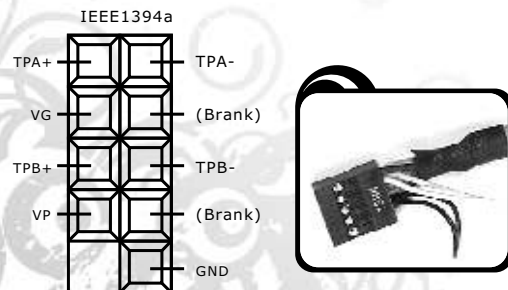
USB connection

Please consult your motherboard manual to find out the section of "USB connection".



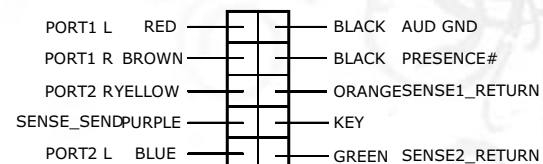
IEEE1394 Firewire connection

Please consult your motherboard manual to find out the section of "IEEE1394 Firewire connection".

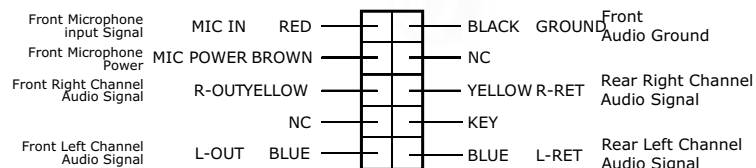


3-4 Audio connection

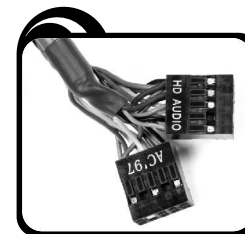
- Please refer to the following illustration of Audio connector and your motherboard user manual.
- Please select the motherboard which used AC'97 or HD Audio (Azalia), (be aware of that your audio supports AC'97 or HD Audio (Azalia)) or it will damage your device(s).
- On some motherboards, the connectors for Audio are not the same as the drawing below. Please check with your motherboard manual before installing.



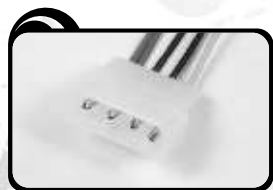
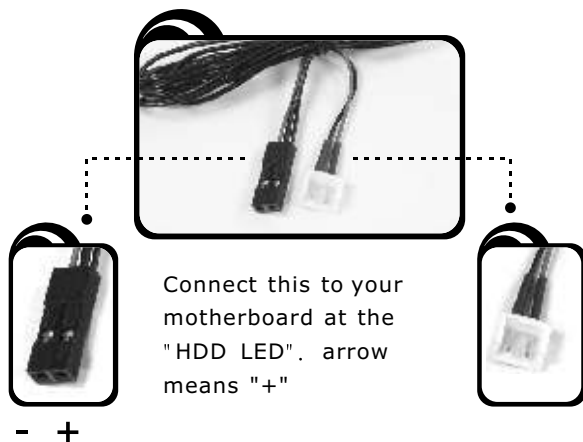
AUDIO AZALIA Function



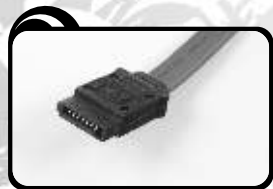
AUDIO AC'97 Function



3-5 Connexion eSATA



Connect this to your power supply unit.



Connect this to your motherboard at SATA.

Chapter 4. Liquid Cooling Installation

4-1 Installation steps

We strongly suggest the following installation procedures. Failure to comply may result in leaks and damaged components.

Components check



Install Waterblock

P19

4-2-1 Intel LGA 775

4-2-2 Intel P4 478

4-2-3 AMD K8

4-2-4 AMD AM2



Install Water tube

P29



Fill Coolant

P31



Complete installation

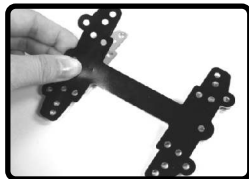
4-2 Install waterblock

4-2-1 Secure Waterblock onto CPU (Intel LGA 775)

Install the Clip on Motherboard



Intel LGA 775
Motherboard



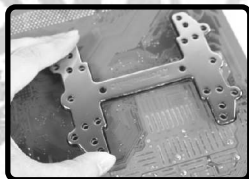
Tear off the tape on the back of the Insulator (C) and place it on the metal H-type clip(A).



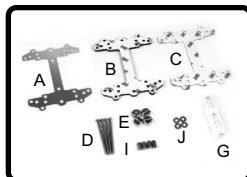
Note: Placing the cushion onto the motherboard with the adhesive will prevent you from removing the cushion in the future. If you are planning to remove the cushion for future use, please don't remove the protective tape.



Combine the Insulator(C) and the cushion (B) using the adhesive. Stick the metal H-type clip(A) with the insulators (BC). Tear off the protective layer to adhere it onto the motherboard.



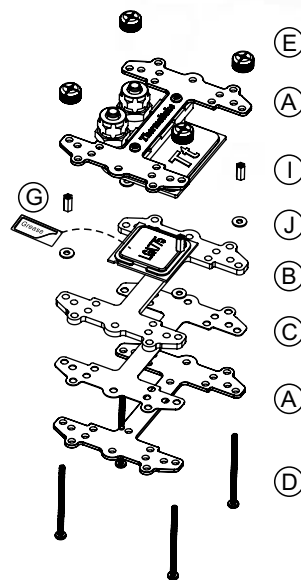
Attach H-type clips(including ABC) on the back side of motherboard.



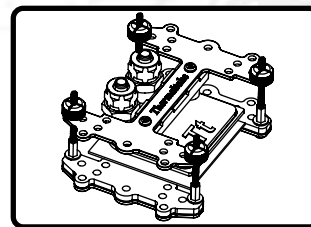
Components for LGA 775:
A-Metal H-type clip
B-Cushion
C-Insulator
D-50mm screws
E-Thumb nuts
G-Thermal compound
I -Stand offs
J -Red washers

Install Waterblock on Motherboard

Exploded View



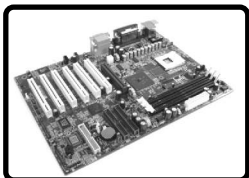
Completed View



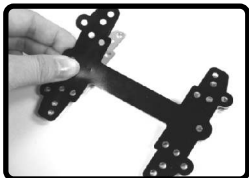
1. Insert the screws (D) through the Clip(ABC) into the four holes on the Motherboard.
2. Put the washers (J) along the screws to prevent the electric current.
3. Put the stand offs (I) along the screws to fix the screws on the motherboard.
4. Apply a thin layer of thermal compound (G) onto the processor.
5. Place waterblock on the processor through the screws and fix it by thumb nuts(E).

4-2-2 Secure Waterblock onto CPU (Intel P4 Socket 478)

Install the Clip on Motherboard



Intel P4 Socket 478
Motherboard



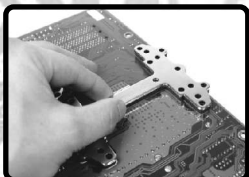
Tear off the tape on the back of the Insulator (C) and place it on the metal H-type clip(A).



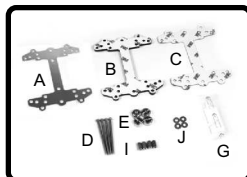
Note: Placing the cushion onto the motherboard with the adhesive will prevent you from removing the cushion in the future. If you are planning to remove the cushion for future use, please don't remove the protective tape.



Combine the Insulator(C) and the cushion (B) using the adhesive. Stick the metal H-type clip(A) with the insulators (BC). Tear off the protective layer to adhere it onto the motherboard.



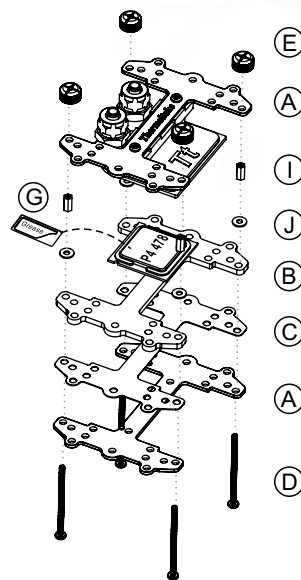
Attach H-type clips(including ABC) on the back side of motherboard.



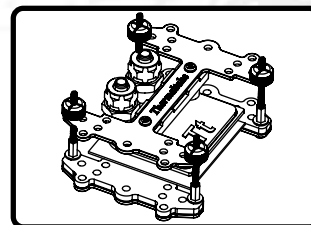
Components for P4 478:
A-Metal H-type clip
B-Cushion
C-Insulator
D-50mm screws
E-Thumb nuts
G-Thermal compound
I -Stand offs
J -Red washers

Install Waterblock on Motherboard

Exploded View



Completed View



1. Insert the screws (D) through the Clip(ABC) into the four holes on the Motherboard.
2. Put the washers (J) along the screws to prevent the electric current.
3. Put the stand offs (I) along the screws to fix the screws on the motherboard.
4. Apply a thin layer of thermal compound (G) onto the processor.
5. Place waterblock on the processor through the screws and fix it by thumb nuts(E).

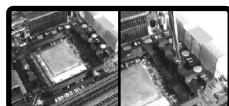
4-2-3 Secure Waterblock onto CPU (AMD K8 Socket 754 / 939 / 940)

A. Install by back plate for motherboard (Standard installation)

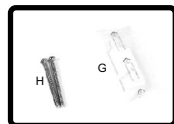
Install the Clip on Motherboard



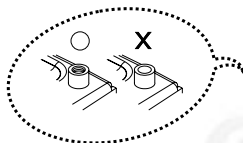
AMD K8
Motherboard



Remove the
retention frame
from motherboard.



Components for
AMD K8:
G-Thermal compound
H-38mm screws

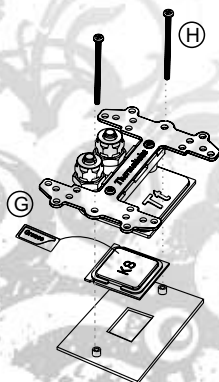


Check Your Back Plate!

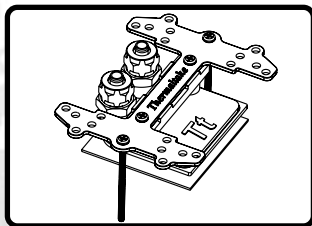
- A. If the back plate does have threaded stand offs, please continue with standard installation.(4-2-3 A)
B. If the back plate does NOT have threaded stand offs, please continue with 4-2-3 B.

Install Waterblock on Motherboard

Exploded View



Completed View



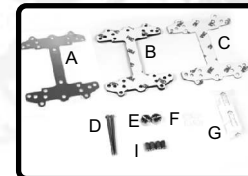
1. Apply a thin layer of thermal compound(G) onto the processor.
2. Place waterblock on the processor.
3. Secure the waterblock on the motherboard by using screws(H).

B. Install by clips bundled in package

Install the Clip on Motherboard

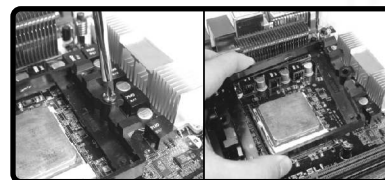


AMD K8 Motherboard

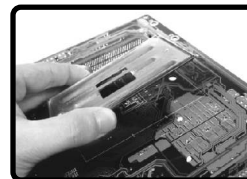


Components for AMD K8:

- A-Metal H-type clip
B-Cushion
C-Insulator
D-50mm screws
E-Thumb nuts
F-White washers
G-Thermal compound
I -Stand offs



Remove the retention
module from the motherboard.



Remove the back plate on
back side of motherboard.



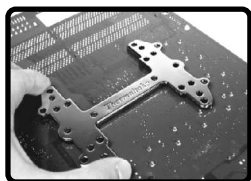
Tear off the tape on the back of
the Insulator (C) and place it on
the metal H-type clip(A).

Note:

Placing the cushion onto the motherboard with the adhesive will prevent you from removing the cushion in the future. If you are planning to remove the cushion for future use, please don't remove the protective tape.



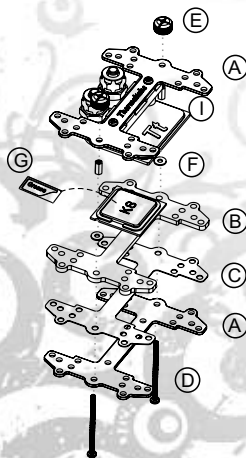
Combine the Insulator(C) and the cushion (B) using the adhesive. Stick the metal H-type clip(A) with the insulators (BC). Tear off the protective layer to adhere it onto the motherboard.



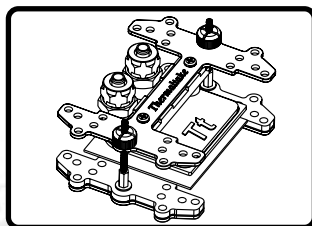
Attach H-type clips(including ABC) on the back side of motherboard.

Install Waterblock on Motherboard

Exploded View



Completed View



- 1.Insert the screws (D) through the Clip(ABC) into the two holes on the Motherboard.
- 2.Put the washers (F) along the screws to prevent the electric current.
- 3.Put the stand offs (I) along the screws to fix the screws on the motherboard.
- 4.Apply a thin layer of thermal compound(G) onto the processor.
- 5.Place waterblock on the processor through the screws and fix it by thumb nuts(E).

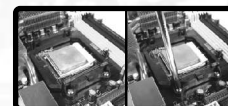
4-2-4 Secure Waterblock onto CPU (AMD Socket AM2)

A. Install by back plate for motherboard (Standard installation)

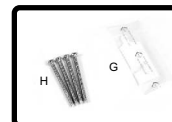
Install the Clip on Motherboard



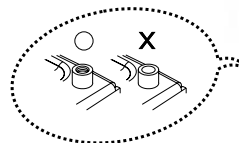
AMD AM2
Motherboard



Remove the retention frame from motherboard.



Components for
AMD AM2:
G-Thermal compound
H-38mm screws

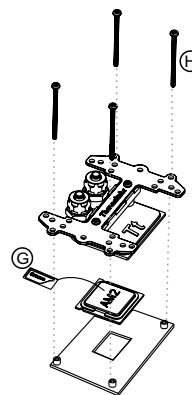


Check Your Back Plate!

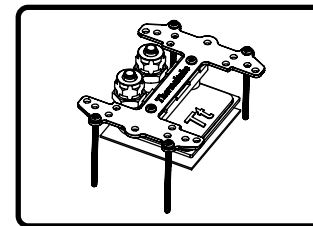
- A. If the back plate does have threaded stand offs, please continue with standard installation.(4-2-4 A)
B. If the back plate does NOT have threaded stand offs, please continue with 4-2-4 B.

Install Waterblock on Motherboard

Exploded View



Completed View



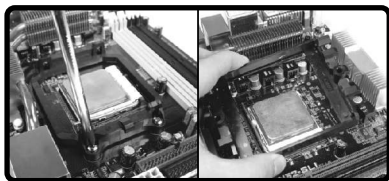
- 1.Apply a thin layer of thermal compound(G) onto the processor.
- 2.Place waterblock on the processor.
- 3.Secure the waterblock on the motherboard by using screws(H).

B. Install by clips bundled in package

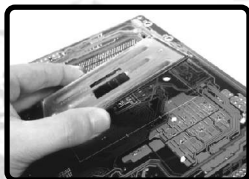
Install the Clip on Motherboard



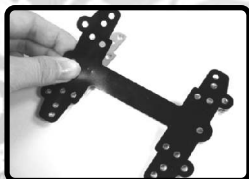
AMD AM2 Motherboard



Remove the retention module from the motherboard.



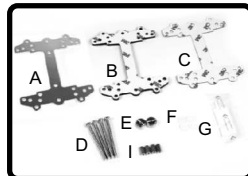
Remove the back plate on back side of motherboard.



Tear off the tape on the back of the Insulator (C) and place it on the metal H-type clip (A).

Note:

Placing the cushion onto the motherboard with the adhesive will prevent you from removing the cushion in the future. If you are planning to remove the cushion for future use, please don't remove the protective tape.



Components for AMD AM2:

A-Metal H-type clip

B-Cushion

C-Insulator

D-50mm screws

E-Thumb nuts

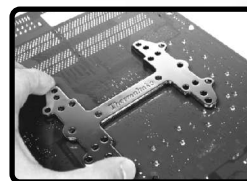
F-White washers

G-Thermal compound

I -Stand offs



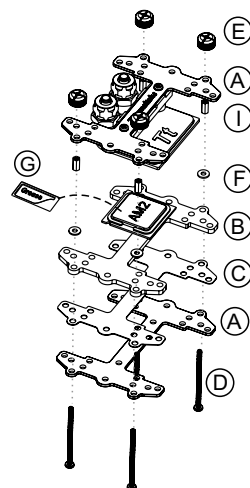
Combine the Insulator (C) and the cushion (B) using the adhesive. Stick the metal H-type clip (A) with the insulators (BC). Tear off the protective layer to adhere it onto the motherboard.



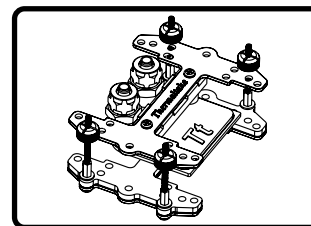
Attach H-type clips (including ABC) on the back side of motherboard.

Install Waterblock on Motherboard

Exploded View

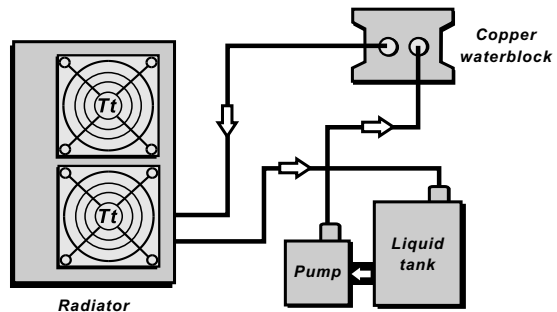


Completed View



1. Insert the screws (D) through the Clip (ABC) into the two holes on the Motherboard.
2. Put the washers (F) along the screws to prevent the electric current.
3. Put the stand offs (I) along the screws to fix the screws on the motherboard.
4. Apply a thin layer of thermal compound (G) onto the processor.
5. Place waterblock on the processor through the screws and fix it by thumb nuts (E).

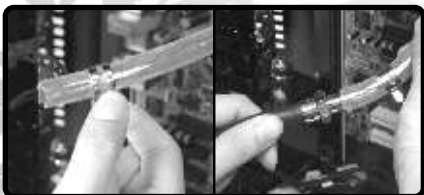
4-3 Install watertube



Unscrew the nut on waterblock.



Insert a tube through the nut of waterblock. Tighten the nut on the waterblock.



Insert the hose clip and the hose connector through the tube from the waterblock.



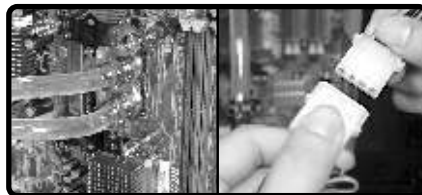
Use pliers to tighten the hose clips. Repeat the steps for the other side.



Unscrew the nut of tank and insert the tube from radiator through the nut of pump. Then tighten it.



Unscrew the nut of pump and insert a new tube through the nut of pump. Then tighten it.



Unscrew the nut of waterblock and insert the tube from pump through the nut of pump. Then tighten it. Connect the 4-pin connector of pump to power supply.

4-4 Fill Coolant



Open the cover of liquid tank and fill the tank up with coolant.



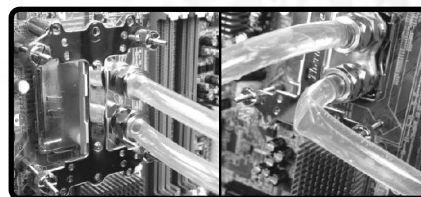
Turn on the PC power switch.



Liquid level will decrease when you power on the system, please keep filling coolant until the tank is filled up.



Please make sure liquid is flowing continuously and smoothly within the tube. Close the cover of liquid tank.



Note:

1. If bubbles are forming within the tubing, you may tap the tubing gently to remove them until all are gone.
2. After installation is completed, please ensure there are no bent tubings.

4-5 Schedule Maintenance

Performing scheduled check up for the liquid cooling system will ensure optimal cooling performance!

Pump

Ensure pump is working proper.



Water Tank

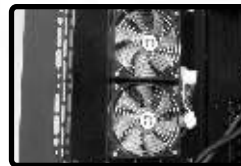
Check for water level within the water tank. If the liquid level is below the low level, please follow the installation steps on manual to refill the coolant.
(we strongly recommend checking the water level once a month)

Note: It is recommended that coolant to be replaced once every 6 months. Depending on the workload of the system, coolant may need to be refilled more often.



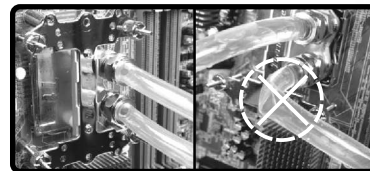
Fan Assembly

Make sure fan is operating properly without abnormal noise.



Tubing

Tubing within the system must not be bent.
Replace tubing if necessary.



Tubing Connections

Make sure each connection is tightly secured and that there are no sign of leakage.